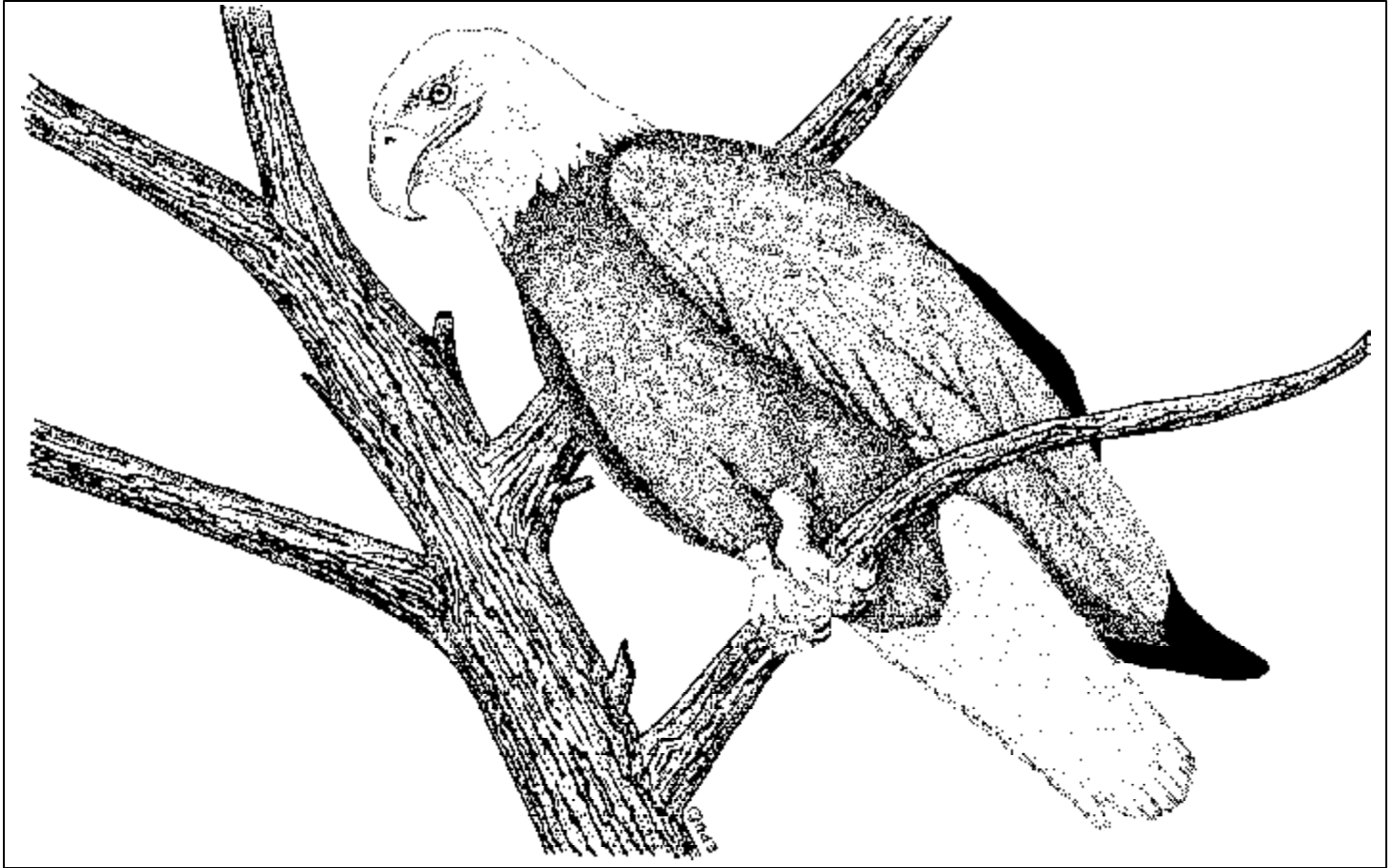


# Bald Eagle

(*Haliaeetus leucocephalus*)



With the exception of a few wandering individuals, bald eagles are found only in North America. From the Gulf of Mexico to near the Arctic, bald eagles occur predominantly along the coasts and near lakes, rivers and reservoirs. In 1782, the Continental Congress of the United States adopted the native bald eagle as the nation's symbol. Since that time, when bald eagles were common and frequently observed, bald eagle populations have incurred dramatic changes.

Initially, the influence of people on bald eagles was limited and localized; but, as human populations grew and expanded, increased human activities negatively impacted bald eagle populations. Habitat modification and loss, shooting, trapping, poisoning and electrocution all contributed to the decline of the bald eagle. However, the most significant cause for declining bald eagle populations was probably the introduction of DDT during WWII and the subsequent widespread use of this and other organochlorine pesticides. These persistent chemicals were passed from aquatic insects and invertebrates to minnows to larger fish and to birds.

The residues from these pesticides became most concentrated at the upper levels of the food chain. Bald eagles consumed contaminated fish and other prey. Eventually, the concentrated chemicals interfered with the eagle's ability to lay eggs with shells strong enough to withstand incubation. Nesting attempts failed, and, by the 1960s, the numbers of bald eagles in the lower 48 states had declined drastically.

With acknowledgement of the detrimental effects of DDT, its use in the United States was banned in 1972. At about the same time, the bald eagle was listed by the Department of the Interior as "Endangered" in most states. Under the Endangered Species Act (1973), programs for the recovery and protection of bald eagles and their habitats were implemented.

Now bald eagle populations are showing signs of a comeback. From the low average winter counts of less than 4,000 bald eagles in the lower 48 states during the 1960s, current counts average about 13,000 wintering birds. In 1995, federal status of the bald eagle was changed to "Threatened".



**Adult bald eagle.** White head and tail, dark body.



**Immature bald eagle.** Mottling and white diagonal line and spot of underwing.



**Adult golden eagle.** Uniformly dark with golden head and nape.



**Immature golden eagle.** White at base of flight and tail feathers, dark body.

## Description

The scientific name for the bald eagle is descriptive of the eagle's association with water and of its most distinguishing characteristic. *Haliaeetus leucocephalus* is the Greek wording for "sea eagle with white head." The bald eagle was named when "bald" (from the Welsh origin "balde") also meant white or white-faced. In adult plumage, the fully-feathered head of the bald eagle is white, as is the tail.

The bald eagle is a large bird with a wingspan reaching from six and a half to eight feet. Females and males are similar in appearance, but females are slightly larger. Bald eagles are about three feet in length from head to tail tip and weigh from 8 to 15 pounds.

The adult bald eagle is easily recognized by its overall dark body and white head and tail. Bald eagles attain the distinctive white head as they reach maturity at about four or five years of age. Before this age, their plumage is generally dark with white mottling on body, wing and tail feathers. Even with varying degrees of white in plumages of individuals, young bald eagles in flight can be identified by the pattern of a white diagonal line and white spot on the underwing.

The golden eagle, a year-round resident of Utah, is similar in appearance to the bald eagle. It is also a large, dark eagle. The two species, however, can be distinguished by a combination of characteristics. The head and nape of the golden eagle is distinctly "golden" in color. Unlike the bald eagle, the golden eagle's legs are feathered all the way to the toes. Adult golden eagles appear uniformly dark with a light gray barring on flight and tail feathers seen only at close range. Younger golden eagles do have white in their plumage, but the white is restricted to the base of both the flight and tail feathers.

The bald eagle has a relatively large head, and in flight the head extends forward of the wings more than half the length of the tail. In contrast, the golden eagle's head extends forward of the wings less than half the length of the tail.

When observing eagles, also listen for vocalizations. Bald eagles are very vocal, particularly when they are around other eagles. Golden eagles, on the other hand, tend to be silent.

In flight, bald eagles typically fly with slow, powerful wing beats. When soaring, their wings are usually flat. Occasionally, two bald eagles will lock talons and whirl with each other while flying. Bald eagles average 30 to 40 miles per hour in normal flight but can reach speeds up to 100 miles per hour while diving.

# Bald Eagles in Utah

Utah hosts one of the largest state populations of wintering bald eagles. More than 1,200 bald eagles have been counted in Utah during recent years. About 3,000 to 4,000 of the 13,000 bald eagles that winter in the lower 48 states occur west of the Rocky Mountains. Twenty-five to thirty percent of these western eagles spend the winter in Utah, indicating the significance of Utah's winter habitat.

## Food Habits Related to Winter Habitats

Dependent primarily on fish for food, bald eagles move south from their breeding grounds in Canada, Alaska and other northern states as food becomes less available with winter and freezing conditions. The wintering eagles begin arriving in Utah in November. Highest numbers of bald eagles occur here in January and February, and most begin heading north again in March.

Bald eagles are found throughout Utah during the winter. They are opportunistic and occur where food is most available. Many eagles winter near the rivers, lakes and marshes of Utah looking for unfrozen, open water from which to catch fish. Fish are indeed their most important food; however, birds like coots and ducks, especially when ill or injured, mammals and even reptiles will be consumed when available. Carrion is also eaten and often provides much of their winter food. Largest bald eagle concentrations occur along the shores of Great Salt Lake and in the associated roost sites of the Wasatch Mountains, in the desert valleys of northcentral Utah, and along the major rivers in eastern and southern Utah.

Especially unique is Utah's desert population of wintering bald eagles. More than 200 bald eagles have been counted in the desert valleys of northcentral Utah, far from any water. In this open habitat, a large portion of the diet of these eagles is carrion, principally road- and hunter-killed blacktail jackrabbits.

## Behavior

Bald eagles often congregate in large numbers at feeding, perching and roosting sites. They commonly use large cottonwoods along rivers and coniferous trees at higher elevations for perching during the day and roosting at night. Roost sites can be quite a distance from where the eagles spend the day. Many of the bald eagles in the desert valleys return at night to wooded canyons of adjacent mountain ridges for cover and protection from weather and disturbance.

Bald eagles most frequently hunt from perches, but they may also hunt while in flight. In the winter, they occasionally may be observed sitting on ice at the edge of open water. Their eyesight is five to six times more power



ful than ours, and they are capable of spotting fish and other prey at great distances.

By March, bald eagles begin leaving Utah to move north again to summer breeding grounds. Studies of marked and transmitter-equipped eagles have revealed that some of Utah's wintering bald eagles nest in areas as far away as the Northwest Territories of Canada. The dependency of migratory species like the bald eagle on both breeding and wintering habitats creates critical ecological links between even very distant locations like Utah and the Northwest Territories. The winter habitat in Utah is as important to bald eagle populations as is their prime breeding habitat north of Utah.

## Reproduction

The onset of nesting activities by bald eagles in North America varies with latitude. Most of the eagles that winter in Utah reach their summer grounds by April. Bald eagles are believed to pair for life. Spectacular aerial displays by both the male and female are a part of their courtship. Large stick nests, often three to five feet in diameter, are built in tall trees. The eagles add new sticks to the nest each year, and some nests can be as tall as five or six feet. One to three eggs are laid, and both parents share in the incubation that lasts about 35 days. The young birds leave the nest 10 to 11 weeks after hatching. They remain dependent on the adults for a long period after fledging as they improve their flying strength and hunting ability. In the fall, the eagles move south again.

Currently, three bald eagle nests are known to exist in southeastern Utah. Two nests are located within 15 miles of each other along the Colorado River. Of these two nests, one has been active since 1983, with pairs having limited nesting success. The second nest was built in the top of a dead cottonwood tree along the river in 1988. Eagles have returned to this site each year since, as well. The third nest is located at an undisclosed site.

In 1996, a new pair began nesting along the shore of the Great Salt Lake. This yearly nesting activity indicates that bald eagles can successfully reproduce in Utah. As long as there is suitable habitat, there is a chance that Utah's breeding population will continue to increase.

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## Current Status and Management

Bald eagles are protected by the Utah Wildlife Code, the Migratory Bird Treaty Act, the Eagle Protection Act and the Endangered Species Act. These state and federal laws prohibit harassing, injuring or killing eagles. Midwinter surveys of bald eagles within the lower 48 states were initiated by the National Wildlife Federation in 1979. These annual surveys are conducted to monitor bald eagle populations and identify important winter habitats of the bald eagle. With the return of bald eagles to nesting sites in Utah, it is also becoming of increasing importance to monitor breeding habitats. Cottonwood trees along rivers, lakes and reservoirs are critical for roost sites and nest sites for bald eagles. Loss of this habitat jeopardizes both wintering and breeding populations, and excessive human disturbance of this habitat during roosting or breeding may cause abandonment of the site.

Currently, efforts of Utah Division of Wildlife Resources wildlife biologists are directed at monitoring wintering and breeding activity and protecting habitat. In addition to the midwinter survey of Utah's bald eagle population, wildlife biologists survey nest sites and band the eaglets before they fledge. Banding the young birds helps monitor movement within the state or during migration. Future plans include closer observation of nest sites during the breeding season to document activity and help ensure successful reproduction.



## What You Can Do

- Participate in Bald Eagle Day sponsored by the Watchable Wildlife Program of the Utah Division of Wildlife Resources. For Eagle Day, Division personnel provide guided observation opportunities at sites throughout Utah where there are large concentrations of wintering bald eagles. Bald Eagle Day is usually scheduled for early February, and public announcement is made several weeks prior to the event.
- Report all observations of eagles in areas of the state where they have not previously been sighted. Also note any nest sites and report them to the Utah Division of Wildlife Resources. If you find an injured or dead eagle, please contact Wildlife Resources as soon as possible.
- Remember that bald eagles and other wildlife may be sensitive to your presence. Respect their needs and act responsibly. Disturbances may interfere with their ability to fulfill daily needs for food and energy balance and may cause abandonment of sites. Observe them quietly and from a distance.
- For more information about bald eagles, contact the Watchable Wildlife Program, Utah Division of Wildlife Resources, 1594 West North Temple, Suite 2110, Salt Lake City, UT 84116. (801) 538-4700.

## Additional Reading

Dunne, Pete, David Sibley and Clay Sutton. *Hawks in Flight*. Houghton Mifflin Company, Boston, 1988.

Clark, William S. *A Field Guide to Hawks*. The Peterson Field Guide Series. Houghton Mifflin Company, Boston, 1987.

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